EXECUTIVE SUMMARY

A newly developed data series, *U.S. Corporate R&D*, suggests that U.S. industry significantly increased its spending on research and development (R&D) in 1997. In that year, the top 500 R&D-spending corporations in the United States spent a total of $111 billion of their own funds on R&D, a 9.0-percent increase over the $102 billion spent by the top 500 R&D spenders in 1996. The $111 billion spent on R&D by the top 500 R&D corporations is equivalent to 86.8 percent of the total industry-financed and industry-performed R&D in the United States, as reported by the National Science Foundation (NSF) based on data collected by the Bureau of Census. These expenditures also equal 54.2 percent of total U.S. R&D by all performers from all sources.[1]

The *U.S. Corporate R&D* data series was built using data from Standard & Poor's *Compustat*[2] listing for publicly held firms. It was jointly developed by the U.S. Commerce Department's Office of Technology Policy (OTP) and the NSF's Division of Science Resources Studies (SRS). It supplements SRS' data series on U.S. industry R&D spending with timely information on eight major, and 45 detailed, industrial sectors. The new data series features for the years 1996 and 1997 the combined domestic and overseas R&D spending, net sales, capital investment, and employment data by the top 500 publicly-held R&D-spending corporations that are headquartered in the United States.

As a supplement to existing data on U.S. R&D expenditures, the *U.S. Corporate R&D* database meets a variety of analytic needs. First, tallies of latest year R&D spending data are available for firms very soon after the close of their fiscal year. By July of each year, *Compustat* compiles the latest R&D figures for a majority of the 9,800 active U.S. companies in its database. This information can be used to help substantiate SRS R&D spending estimates issued earlier in the year for the most recently completed year. Second, because *Compustat* provides data on other performance indicators for hundreds of individual firms (e.g., sales, employment, exports, foreign sales, and profits), such additional information could provide immediate context for analyses of industry R&D activity.

Among the eight major industrial sectors used in this report, the information and electronics sector had the highest share of the $111 billion spent by the top 500 R&D firms in 1997—$45.8 billion (41 percent). Second was medical substances and devices with $20 billion (18 percent); followed by motor vehicles and other transportation equipment with $18 billion (17 percent); basic industries and materials with $8 billion (8 percent); machinery and electrical equipment with $7 billion (6 percent); chemicals with $7 billion as well (6 percent); aircraft, guided missiles, and space vehicles with $5 billion (4 percent) and other industries (general services, engineering, accounting, research/testing services; and finances, insurance and real estate), with $0.4 billion (0.4 percent).

Volume 1 of this report, prepared jointly by OTP and SRS, is divided into two sections. The first, "R&D Expenditures by Industry Category," details aggregate data of the *U.S. Corporate R&D* data series for 1996 and 1997. The second section discusses the "purpose and characteristics of the data series" and compares it to the long-established SRS data series on U.S. industry R&D.

Volume 2 of this report, by NSF, is entitled, "Company Information on Top 500 Firms in R&D." It details the R&D expenditures and other financial characteristics of each of the top 500 firms in R&D in 1996 and 1997. This information is available because the Securities and Exchange Commission (SEC) requires public corporations to provide such information in detailed financial reports.

[1] These proportions are based on national R&D data provided in Table B-1A of National Science Foundation, *National Patterns of R&D Resources: 1998*, by Steven Payson, NSF 99-335 (Arlington, VA 1999).

[2] Standard & Poor's *Compustat*, Englewood, Colorado.